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PTO/SB/81 (10-00)
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REVOCATION AND SUBSTITUTE POWER OF ATTORNEY OR AUTHORIZATION OF AGENT

Applicati n Number	See Attached Appendix A
Filing Date	See Attached Appendix A
First Named Inventor	See Attached Appendix A
Group Art Unit	Not yet known
Examiner Name	Not yet known
Attorney Docket Number	See Attached Appendix A

I hereby revoke all previous powers of attorney or authorizations of agent given in the above-identified application, and I hereby appoint:



Practitioner(s) named below:

Herb Boswell, Reg. No. 27,311; Laurel S. Bernstein, Reg. No. 37,280; Robert S. Andrews, Reg. No. 44,508; Neil Bartfeld Reg. No. 39,901; Matthew Grumbling, Reg. No. 44, 427; Donna T. Ward, Reg. No. 48,271; Kenneth Tarbet, Reg. No. 43,181; Laura Handley, Reg. No. 39,704; Michael Shuster, Reg. No. 41,310; Susan T. Hubl, Reg. No. 47,668.

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please change the correspondence address to, and associate the above-identified application with:

0035807



Practitioners at Customer Number

OR

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☐ Firm or Individual Name

Address

Address

City

State

Zip

Country

Telephone

Fax

MAY 14 2003

TECH CENTER 1600/2900

I am the:



Applicant/Inventor.



Assignee of record of 100% interest. See 37 CFR 3.71.

Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).

SIGNATURE of Applicant or Assignee of Record

Name

B. Lynne Parshall

Title

Executive Vice President

Signature

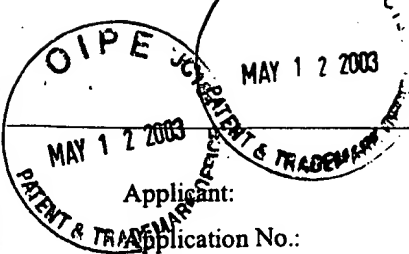
Date

4/21/03

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representativ (s) are required. Submit multiple forms if more than one signature is required, se below*.

☒ *Total of 1 forms are submitted.

23546/01000/SF/5097417.1



Certificate Under 37 CFR § 3.73(b)

Applicant:

See Attached Appendix A

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Application No.:

See Attached Appendix A

Filing Date:

See Attached Appendix A

MAY 14 2003

Name of Assignee:

Isis Pharmaceuticals, Inc.

Type of Assignee (e.g. corporation, partnership, university, government agency, etc.):

Corporation

TECH CENTER 1600/2900

The above-mentioned Assignee certifies that it is the assignee of the entire right, title and interest in the patent application identified above by virtue of either:

A. ☒ An assignment from the inventor(s) of the patent application identified above. The assignment was recorded in the Patent and Trademark Office at Reel _____, Frame _____. **See attached Appendix A for information.** OR

B. ☐ A chain of title from the inventor(s), of the patent application identified above, to the current assignee as shown below:

1. From: _____
To: _____
The document was recorded in the Patent and Trademark Office at
Reel: _____ and Frame: _____, or for which a copy thereof is attached.
2. From: _____
To: _____
The document was recorded in the Patent and Trademark Office at
Reel: _____ and Frame: _____, or for which a copy thereof is attached.
3. From: _____
To: _____
The document was recorded in the Patent and Trademark Office at
Reel: _____ and Frame: _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

☐ Copies of assignments or other documents in the chain of title are attached.

The undersigned has reviewed all the documents in the chain of title of the patent application identified above and, to the best of undersigned's knowledge and belief, title is in the assignee identified above.

The undersigned (whose title is supplied below) is empowered to sign this certificate on behalf of the assignee.

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under Section 1001, Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

4/21/03

Date

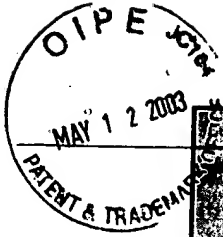
Signature

B. Lynne Parshall

Name

Executive Vice President and CFO

Title



APPENDIX A

Assignee: ISIS PHARMACEUTICALS, INC.

ISIS No.	App/Docket No.	Application No. Filing Date:	Assignors	Group Art Unit	Reel	Frame	Recorded
HTS-0002	23546-07658	10/187,110 06/29/2002	Donna T. Ward Kenneth W. Dobie	1653	013076	0173	06/29/02
Title: Antisense Modulation of ADAM12 Expression							
HTS-0010	23546-07659	10/178,258 06/20/2002	Kenneth W. Dobie	1645	013041	0242	06/20/02
Title: Antisense Modulation of Heme Oxygenase 1 Expression							
HTS-0013	23546-07660	10/211,859 07/31/2002	Brett P. Monia Kenneth W. Dobie	1653	013172	0152	07/31/02
Title: Antisense Modulation of Ran GTPase Activating Protein 1 Expression							
HTS-0020	23546-07661	10/161,983 05/31/2002	Donna T. Ward Susan M. Freier	1635	012975	0748	05/31/02
Title: Antisense Modulation of Rb2/p130 Expression							
RTS-0213	23546-07663	10/154,708 05/22/2002	Andrew T. Watt	1645	012953	0176	05/22/02
Title: Antisense Modulation of CDC-like Kinase 1 Expression							
RTS-0266	23546-07664	09/960,143 09/24/2001	Brenda F. Baker Susan M. Freier	1635	012201	0106	09/24/01
Title: Antisense Modulation of Interleukin 8 Expression							
RTS-0297	23546-07666	09/920,671 08/01/2001	C. Frank Bennett Susan M. Freier	1635	012053	0521	08/01/01
Title: Antisense Modulation of CoREST Expression							

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APPENDIX A Assignee: ISIS PHARMACEUTICALS, INC.							
ISIS No.	Atty Docket No.	Application No. Filing Date:	Assignors	Group Art Unit	Reel	Frame	Recorded
RTS-0398	23546-07667	10/159,266 05/31/2002	Kenneth W. Dobie	1633	012956	0945	05/31/02
Title: Antisense Modulation of Cathepsin Z Expression							
RTS-0337	23546-07700	10/006,883 12/05/2001	Kenneth W. Dobie Mark P. Roach	1645	012372	0990	12/05/01
Title: Antisense Modulation of NOD1 Expression							
RTS-0256	23546-07701	10/003,919 12/06/2001	C. Frank Bennett Susan M. Freier	1645	012360	0596	12/06/01
Title: Antisense Modulation of SHIP-1 Expression							
PTS-0042	23546-07703	10/118,779 07/02/2002	Nicholas M. Dean, Susan M. Freier, Kenneth Dobie	1646	013075	0834	07/02/02
Title: Antisense Modulation of Cyclin-Dependent Kinase 4 Expression							
PTS-0044	23546-07704	10/173,902 06/17/2002	Brett P. Monia Kenneth W. Dobie	1646	013023	0118	06/17/02
Title: Antisense Modulation of G Protein-Coupled Receptor 39 Expression							
PTS-0045	23546-07705	10/177,896 06/20/2002	C. Frank Bennett Kenneth W. Dobie	1645	013050	0407	06/20/02
Title: Antisense Modulation of Phospholipase D2 Expression							

APPENDIX A						
Assignee: ISIS PHARMACEUTICALS, INC.						
ISIS No.	Atty Docket No.	Application No. Filing Date:	Assignors	Group/Art Unit	Reel	Frame Recorded
PTS-0047	3546-07706	10/177/798 06/19/2002	Brett P. Monia Kenneth W. Dobie	1645	013058	0389 06/19/02
Title: Antisense Modulation of Orphan G-Protein,						
PTS-0048	23546-07707	10/210,428 07/31/2002	C. Frank Bennet Kenneth W. Dobie	1645	013168	0685 07/31/02
Title: Antisense Modulation of Hepatoma-Derived Growth Factor Expression						
RTS-0204	23546-07708	10/160,787 05/31/2002	Andrew T. Watt	1643	012971	0952 05/31/02
Title: Antisense Modulation for PCTAIRE Protein Kinase 2 Expression						
RTS-0299	23546-07709	10/159,834 05/31/2002	Kenneth W. Dobie	1633	12960	0946 05/31/02
Title: Antisense Modulation of Isoprenylcysteine Carboxyl Methyltransferase Expression						
RTS-0354	23546-07710	10/210/802 07/31/2002	Susan M. Freier Kenneth W. Dobie	1632	013168	0717 07/31/02
Title: Antisense Modulation of Cyclin-Dependent Kinase 6 Expression						
RTS-0363	23546-07711	10/144,488 05/10/2002	Brett P. Monia Susan M. Freier	1645	012909	0713 05/10/02
Title: Antisense Modulation of Farnesyl Transferase Beta Subunit Expression						
RTS-0365	23546-07712	10/159,856 05/31/2002	Susan M. Freier Kenneth W. Dobie	1633	012974	0419 05/31/02
Title: Antisense Modulation of G Protein-Coupled Receptor Kinase 6 Expression						

APPENDIX A							
Assignee: ISIS PHARMACEUTICALS, INC.							
ISIS No.	App. Docket No.	Application No.	Assignors	Group/Art Unit	Reel	Frame	Recorded
		Filing Date:					
RTS-0369	23546-07713	10/174,020 06/17/2002	Brett P. Monia Kenneth W. Dobie	1646	013023	0086	06/17/02
Title: Antisense Modulation of Hypothetical Tumor Endothelial Marker Expression							
RTS-0374	23546-07714	10/174,456 07/17/2002	Brett P. Monia Susan M. Freier	1642	013034	0593	06/17/02
Title: Antisense Modulation of G Protein-Coupled Receptor 49 Expression							
RTS-0375	23546-07715	10/100,100 07/18/2002	Lex M. Cowser Kenneth W. Dobie	1645	013131	0001	07/18/02
Title: Antisense Modulation of LAM. Domain Kinase 1 Expression							
RTS-0377	23546-07716	10/185,035 06/28/2002	Brett P. Monia Kenneth W. Dobie	1635	013076	0088	06/28/02
Title: Antisense Modulation of DEXRAS1 Expression							
RTS-0379	23546-07717	10/187,659 07/01/2002	Kenneth W. Dobie	1642	013087	0188	07/01/02
Title: Antisense Modulation of P2X4 Expression							
RTS-0333	23546-07724	10/008/789 11/08/2001	C. Frank Bennett Kenneth W. Dobie	1635	021370	0920	11/08/01
Title: Antisense Modulation of Thyroid Hormone Receptor Interactor 6 Expression							
HTS-0026	23546-07755	10/293,998 11/11/2002	Ming-Yi Chuang Kenneth W. Dobie	1653	013504	0558	11/11/02
Title: Modulation of B Protein-Coupled Receptor Re2 Expression							

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